

IN THE CLAIMS:

The following listing of claims will replace all prior versions and listings of claims in the application:

1. (Previously Presented) A catheter assembly for delivering an endoprosthesis within a body lumen, comprising:
a catheter having a proximal end portion and a distal end portion;
an expandable member associated with the distal end portion of the catheter;
an endoprosthesis disposed on the expandable member; and
a sheath disposed on the catheter and over the endoprosthesis, wherein the sheath is configured to rupture during expansion of the expandable member and retract after rupturing to expose the endoprosthesis.

C 2. (Original) The catheter assembly of claim 1, wherein:
the sheath includes a weakened section configured to rupture during expansion of the expandable member.

3. (Previously Presented) A catheter assembly for delivering an endoprosthesis within a body lumen, comprising:
a catheter having a proximal end portion and a distal end portion;
an expandable member associated with the distal end portion of the catheter;
an endoprosthesis disposed on the expandable member; and
a sheath disposed on the catheter and over the endoprosthesis, wherein the sheath is configured to rupture during expansion of the expandable member, wherein:
the sheath includes a plurality of circumferential perforations.

4. (Original) The catheter assembly of claim 1, wherein:
the sheath is stretched over and secured to the expandable member.
5. (Original) The catheter assembly of claim 1, wherein:
the sheath is stretched over and secured to the distal end portion of the
catheter.
6. (Withdrawn) The catheter assembly of claim 1, wherein:
the sheath has a proximal end secured to the proximal end portion of the
catheter, and the sheath has a distal end removably secured to the distal end portion of the
catheter.
7. (Withdrawn) The catheter assembly of claim 6, wherein:
the sheath is stretched prior to securing the sheath to the catheter.
8. (Original) The catheter assembly of claim 1, wherein:
the expandable member includes an inflatable dilatation balloon.
9. (Original) The catheter assembly of claim 1, wherein:
the endoprosthesis is a stent.
10. (Withdrawn) The catheter assembly of claim 9, wherein:
the stent is self-expanding.
11. (Original) The catheter assembly of claim 1, wherein:
the catheter includes an over-the-wire intravascular catheter.

12. (Withdrawn) The catheter assembly of claim 1, wherein:
the catheter includes a rapid-exchange intravascular catheter.
13. (Original) The catheter assembly of claim 1, wherein:
the sheath is formed from an elastomeric material.
14. (Previously Presented) The catheter assembly of claim 1, wherein:
the sheath is formed from polyurethane with a shore hardness of 45D or
lower.
15. (Original) The catheter assembly of claim 1, wherein:
the sheath is formed from a biodegradable material.
16. (Original) The catheter assembly of claim 1, wherein:
the sheath is formed from a material selected from the group consisting of
polyurethanes, polyetheretherketone, polyether amides, copolyesters, and expandable
polytetrafluoroethylene.
17. (Original) The catheter assembly of claim 1, wherein:
the sheath is formed from a material selected from the group consisting of
polyethylenes, polyamides, polyesters, polyether amides, polyurethane, copolyesters, and
polytetrafluoroethylene.
18. (Currently Amended) An apparatus for delivering an endoprosthesis within
a body lumen, comprising:
an endoprosthesis;
means for delivering the endoprosthesis within a body lumen, the means for
delivering having a proximal end portion and a distal end portion;

means for expanding the endoprosthesis, the means for expanding associated with the distal end portion of the means for delivering, wherein the endoprosthesis is disposed on the means for expanding; and

means for retaining the endoprosthesis, the means for retaining being disposed on the means for delivering and over the endoprosthesis, wherein the means for retaining is configured to [detach from the means for delivering] rupture to allow the endoprosthesis to expand into a deployed position when inflation fluid is introduced into the means for expanding and retract to expose the endoprosthesis.

19. (Original) The apparatus of claim 18, wherein:

the means for retaining includes a weakened section configured to rupture during expansion of the means for expanding.

20. (Currently Amended) An apparatus for delivering an endoprosthesis within a body lumen, comprising:

an endoprosthesis;

means for delivering the endoprosthesis within a body lumen, the means for delivering having a proximal end portion and a distal end portion;

means for expanding the endoprosthesis, the means for expanding associated with the distal end portion of the means for delivering, wherein the endoprosthesis is disposed on the means for expanding; and

means for retaining the endoprosthesis, the means for retaining being disposed on the means for delivering and over the endoprosthesis, wherein the means for retaining is configured to [detach from the means for delivering] rupture to allow the endoprosthesis to expand into a deployed position when inflation fluid is introduced into the means for expanding, wherein:

the means for retaining includes a plurality of circumferential perforations.

21. (Original) The apparatus of claim 18, wherein:
the means for retaining is stretched over and secured to the means for
expanding.

22. (Original) The apparatus of claim 18, wherein:
the means for retaining is stretched over and secured to the distal end
portion of the means for delivering.

23. (Currently Amended) An apparatus for delivering an endoprosthesis within
a body lumen, comprising:

an endoprosthesis;

means for delivering the endoprosthesis within a body lumen, the means for
delivering having a proximal end portion and a distal end portion;

means for expanding the endoprosthesis, the means for expanding
associated with the distal end portion of the means for delivering, wherein the
endoprosthesis is disposed on the means for expanding; and

means for retaining the endoprosthesis, the means for retaining being
disposed on the means for delivering and over the endoprosthesis, wherein the means for
retaining is configured to [detach from the means for delivering] rupture to allow the
endoprosthesis to expand into a deployed position when inflation fluid is introduced into
the means for expanding, wherein:

the means for retaining has a proximal end secured to the proximal end
portion of the means for delivering, and the means for retaining has a distal end secured
to the distal end portion of the means for delivering.

24. (Original) The apparatus of claim 23, wherein:
the means for retaining is stretched prior to securing the means for retaining
to the means for delivering.

25. (Original) The apparatus of claim 18, wherein:
the means for expanding includes an inflatable dilatation balloon.
26. (Original) The apparatus of claim 18, wherein:
the endoprosthesis is a stent.
27. (Withdrawn) The apparatus of claim 18, wherein:
the stent is self-expanding.
28. (Original) The apparatus of claim 18, wherein:
the means for delivering includes an over-the-wire intravascular catheter.
29. (Withdrawn) The apparatus of claim 18, wherein:
the means for delivering includes a rapid-exchange intravascular catheter.
30. (Original) The apparatus of claim 18, wherein:
the means for retaining is formed from an elastomeric material.
31. (Previously Presented) The apparatus of claim 18, wherein:
the means for retaining is formed from polyurethane.
32. (Original) The apparatus of claim 18, wherein:
the means for retaining is formed from a biodegradable material.
33. (Previously Presented) The apparatus of claim 18, wherein:
the means for retaining is formed from a material selected from the group
consisting of polyurethanes, polyetheretherketone, polyether amides, copolyesters, and
expandable polytetrafluoroethylene.

34. (Original) The apparatus of claim 18, wherein:
the means for retaining is formed from a material selected from the group consisting of polyethylenes, polyamides, polyesters, polyether amides, polyurethane, copolyesters, and polytetrafluoroethylene.

C | 35. (Currently Amended) A catheter assembly for delivering a stent within a patient's vasculature, comprising:
a catheter tube having a proximal end portion and a distal end portion;
a balloon formed on the distal end portion of the catheter tube;
a stent having a first end and a second end disposed on the balloon; and
a sheath secured to the distal end portion of the catheter tube, wherein the sheath is stretched over the balloon and over the stent, and wherein the sheath includes a weakened section configured to rupture during inflation of the balloon and is configured to rupture into portions which retract towards the first and second ends of the [endoprosthesis] stent after rupturing to expose the [endoprosthesis] stent.

36. (Previously Presented) A catheter assembly for delivering a stent within a patient's vasculature, comprising:
a catheter tube having a proximal end portion and a distal end portion;
a balloon formed on the distal end portion of the catheter tube;
a stent disposed on the balloon; and
a sheath secured to the distal end portion of the catheter tube, wherein the sheath is stretched over the balloon and over the stent, and wherein the sheath includes a weakened section configured to rupture during inflation of the balloon, wherein:
the weakened section comprises a plurality of circumferential perforations.

37. (Original) The catheter assembly of claim 36, further comprising:
a guidewire and an elongate tubular member having a proximal end portion and a distal end portion, the guidewire being slidably disposed within a lumen of the elongate tubular member, the elongate tubular member being disposed within the catheter tube, and the distal end portion of the catheter tube being secured to the distal end portion of the elongate tubular member.

38. (Original) The catheter assembly of claim 35, wherein:
the catheter assembly is configured as an over-the-wire intravascular catheter assembly.

39. (Withdrawn) The catheter assembly of claim 35, wherein:
the catheter assembly is configured as a rapid-exchange intravascular catheter assembly.

40. (Original) The catheter assembly of claim 35, wherein:
the sheath is formed from an elastomeric material.

41. (Previously Presented) The catheter assembly of claim 35, wherein:
the sheath is formed from polyurethane.

42. (Original) The catheter assembly of claim 35, wherein:
the sheath is formed from a biodegradable material.

43. (Original) The catheter assembly of claim 35, wherein:
the sheath is formed from a material selected from the group consisting of polyurethanes, polyetheretherketone, polyether amides, copolyesters, and expandable polytetrafluoroethylene.

44. (Original) The catheter assembly of claim 35, wherein:
the sheath is formed from a material selected from the group consisting of polyethylenes, polyamides, polyesters and polytetrafluoroethylene.

Claims 45-64. Canceled

65. (Previously Presented) A catheter assembly for delivering an endoprosthesis within a body lumen, comprising:
a catheter having a proximal end portion and a distal end portion;
an expandable member associated with the distal end portion of the catheter;
an endoprosthesis disposed on the expandable member; and
a sheath disposed on the catheter and completely over the endoprosthesis, wherein the sheath is configured to rupture during expansion of the expandable member.

66. (Previously Presented) The catheter assembly of claim 65, wherein:
the endoprosthesis has a first end and a second end and the sheath is configured to rupture into portions which retract towards the first and second ends of the endoprosthesis after rupturing to expose the endoprosthesis.

67. (Previously Presented) The catheter assembly of claim 66, wherein:
the sheath includes a weakened section configured to rupture during expansion of the expandable member.

68. (Previously Presented) The catheter assembly of claim 65, wherein:
the sheath is stretched over and secured to the expandable member.

69. (Previously Presented) The catheter assembly of claim 65, wherein:
the sheath is stretched over and secured to the distal end portion of the
C catheter.

70. (Currently Amended) The catheter assembly of claim 65, wherein:
the sheath includes a plurality of perforations which allow the sheath to
rupture during expansion of the expandable member.